

What is claimed is:

1. A method for modeling an electronic components assembly system, the method comprising:
  - representing equipment having specific operating parameters in a proposed line configuration;
  - for each piece of equipment in the proposed line configuration, associating values for the specific operating parameters;
  - building a simulation;
  - running the simulation; and
  - generating a report for the simulation.
2. The method according to claim 1, wherein the step of building the simulation further comprises building simulation objects from templates.
3. The method of claim 2, wherein the templates are completed with values for specific operating parameters.
4. The method of claim 3, further comprising the step of customizing the simulation report.
5. The method according to claim 1, wherein the steps of representing the equipment having specific operating parameters in a proposed line configuration, associating values for the specific operating parameters for each piece of equipment in the proposed line configuration, and building a simulation are performed within approximately thirty minutes.
6. A method for configuring an electronics assembly system, comprising the steps of:
  - a. generating a model of an assembly system having a first configuration;
  - b. selecting a measure of performance for the assembly system;

- c. selecting a criterion for the evaluation of the measured performance of the assembly system;
- d. running the model to generate a performance measure for the system having the first configuration;
- e. testing whether the measure of performance satisfies the criterion; and
- f. if in the test of step d the criterion is not satisfied, modifying the configuration.

7. The method according to claim 6, wherein the model is generated within approximately one half hour.

8. The method according to claim 6, wherein the performance measure is a cost of ownership of the electronics assembly system.

9. The method according to claim 8, wherein the criterion is a value for the cost of ownership of the electronics assembly system.

10. The method according to claim 6, wherein the model represents the assembly system at the material flow level of abstraction.

11. The method according to claim 6, wherein the step of generating the model comprises the steps of:  
selecting components from a set of such components that have been at least partially modeled in advance and;  
entering values corresponding to the selected, at least partially modeled components,  
wherein the selected components and entered values serve as the basis for a simulation of the system.

12. The method according to claim 6, wherein the model is generated using a spreadsheet program in combination with a simulation program.

13. The method of claim 6, in which information relating to at least one method step is transmitted over a network.

14. A computer system configured to model an electronic component assembly line, comprising:

a means for selecting, from a predetermined list, specific equipment for a proposed line configuration, the specific equipment having operating parameters;

a means for associating predetermined values with the operating parameters;

a means for performing a simulation; and

a report generating means.

15. The computer system of claim 14, wherein the means for selecting specific line configuration for a proposed line is a spreadsheet.

16. The computer system of claim 15, wherein the means for associating a predetermined values with the operating parameters is a macro that copies values for the operating parameters from a database.

17. The computer system of claim 16, wherein the database is a second spreadsheet.

18. The computer system of claim 17, wherein the means for performing a simulation is discrete event simulation software.

19. The computer system of claim 18, wherein the report generating means is a third spreadsheet.

20. The computer system of claim 19, wherein the third spreadsheet contains user selectable inputs for generating custom reports.

21. A method for assembling an electronic apparatus, comprising:

- a. creating an electronics assembly system configuration by:
  - i. selecting assembly system components using customer benefit modeling approach,
  - ii. purchasing the components, and
  - iii. installing the components;
- b. selecting settings of electronics assembly system parameters using a customer benefit modeling approach;
- c. imposing those settings on the electronics assembly system; and
- d. running the electronics assembly system to produce the electronic apparatus.

22. The method according to claim 21, wherein the customer benefit modeling approach comprises generating a model of the electronics assembly system having a given configuration, predicting a performance measure for the electronics assembly system having the given configuration using the model, comparing the predicted performance measure against a criterion to determine if the criterion is met by the predicted performance, and, if the predicted performance does not meet the criterion, modifying the configuration of the electronics assembly system.

23. The method according to claim 22, wherein the model represents the assembly system at the material flow level of abstraction.

24. The method according to claim 22, wherein the model comprises a spreadsheet component and a simulation model component.